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# SCIENCE

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FRIDAY, FEBRUARY 6, 1903.

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MSS. intended for publication and books, etc., intended for review should be sent to the responsible editor, Professor J. McKeen Cattell, Garrison-on-Hudson, N. Y.

## THE RISE AND PROGRESS OF ECOLOGY.\*

THE extraordinary development of botanical science during the last decade, in which so much hitherto unknown has passed so rapidly into history, fully justifies the usual review of progress at our great annual gatherings. In following this time-honored custom I have ventured to extend the retrospect far enough to contrast some of the aspects of present-day botany with an earlier condition of the science, familiar to a few of us, though known to most of you only by tradition. The outlook, which has also come to be expected, will be limited to a single branch of the science, which has shown remarkable vigor, but the future of which is regarded by some as problematical. The reminiscences will naturally come first.

Twenty-five years ago, in one of our northern universities, a young instructor with a single assistant was engaged in the rather comprehensive task of teaching botany and 'biology.' The botany consisted in part in the analysis of flowering plants by means of Gray's 'Manual,' and in studying the minute anatomy of leaves, stems and other parts of plants, which the literary students pursued under the name of structural botany, while, with a strong

\* Presidential address delivered at the Washington meeting of the Society for Plant Morphology and Physiology, December 30, 1902.